**Python for Business Analytics – INFO 4120**

**STAT Homework**

**Professor: Neba Nfonsang**

1. Use the DataReader () function to get stock data of four companies from an internet source of your choice. The companies should NOT be IBM, GOOG, MSFT, or AAPL. Then print the object.

**Insert a screenshot of your output and codes here**

1. From your hierarchical data, select the Close, Open Volume, High and Low items of your stock data and store the data for each of these selected items in different DataFrames. For each DataFrame, view the first 5 rows of the data. You may need to unstack your data and transpose it, to extract the Close, Open Volume, High and Low separately. Whatever code you used to process your data such as unstack and transpose, include it in your screenshot

**Insert screenshot of your output and codes you used to process or transform your data into a format ready for analysis here.**

1. **Insert a screenshot of your output and codes for Close stock data here**
2. **Insert a screenshot of your output and codes for Open stock data here**
3. **Insert a screenshot of your output and codes for Volume stock data here**
4. **Insert a screenshot of your output and codes for High stock data here**
5. **Insert a screenshot of your output and codes for Low stock data here**
6. For one of the companies or tickers, create a time series plot for the Open. (That is, create a plot of time vs Open for a specific company of your choice)

**Insert a screenshot of your output and codes**

1. Compute the correlation for all the companies on your **Volume** DataFrame

**Insert a screenshot of your output and codes**

1. Compute the covariance between the **Close** stock price of any two companies in your data (Note: Do not calculate covariance for the entire DataFrame. Compute covariance between **Close** stock price of two companies of your choice only).

**Insert a screenshot of your output and codes**

1. Use the .scatter\_matrix() function to display the scatter plots of **Open** Stock data for all the four companies

**Insert a screenshot of your output and codes**

1. Create a two by two (2 X 2) subplot figure that contains four histograms with High stock prices for the four companies’ data. Each subplot should have a title.

**Insert a screenshot of your output and codes**

1. Compute the returns of the Close Stock price for one of your companies.

**Insert a screenshot of your output and codes**